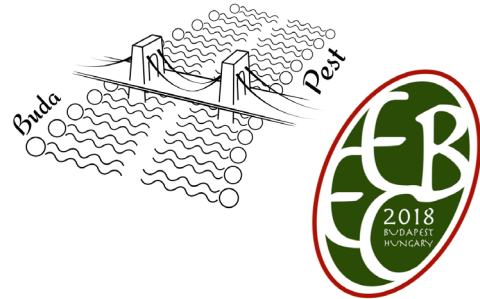
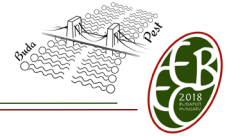




**20th European  
Bioenergetics Conference  
Budapest (Hungary)  
25-30 August, 2018**

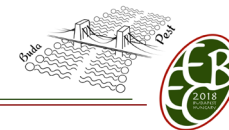


**PROGRAM**



SCIENTIFIC PROGRAMME  
Saturday 25 August, 2018

16:30	<b>OPENING CEREMONY</b> Chair:
17:00	<b>Mitchell medal plenary:</b> Etana Padan
18:00	<b>Opening plenary:</b> Paolo Bernardi
19:00	<b>WELCOME RECEPTION</b>

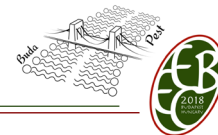


Sunday 26 August, 2018

**08:20 PLENARY IV.A. MITOCHONDRIA AND CANCER**

Chair:

08:20 **Metabolic Management of Glioblastoma** (30+10')**Thomas N. Seyfried***Department of Biology, Boston College, Chestnut Hill, Massachusetts, United States***09:00 PLENARY I. MACROMOLECULAR STRUCTURE AND FUNCTION 1**Chair: **Thorsten Friedrich**09:00 **Cryo-EM structures of complex I from mouse heart mitochondria in biochemically-defined states** (30+10')**Judy Hirst***MRC Mitochondrial Biology Unit, University of Cambridge, United Kingdom*09:40 **Structure of the alternative complex III in a supercomplex with cytochrome oxidase** (30+10')**Robert B. Gennis***Department of Biochemistry, University of Illinois, Urbana, USA*10:20 **Regulation, functional analysis and assembly of dimeric ATP synthases in mitochondria** (30+10')**John E. Walker***MRC Mitochondrial Biology Unit, Cambridge, United Kingdom***11:00 Coffee Break****11:30 PLENARY II. MACROMOLECULAR STRUCTURE AND FUNCTION 2**Chair: **Pia Ädelroth**11:30 **Cytochrome c oxidase – a molecular machine** (30+10')**Mårten Wikström***Institute of Biotechnology, University of Helsinki, Finland*



12:10 **Terminal oxidases of the heme-copper and bd oxidase type, a structural and functional comparison** (30+10')

**Hartmut Michel**

*Department of Molecular Membrane Biology, Max Planck Institute of Biophysics, Frankfurt am Main, Germany*

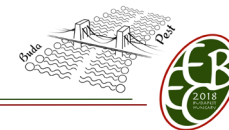
12:50 **CryoEM structures of ATP synthase** (30+10')

**Werner Kühlbrandt**

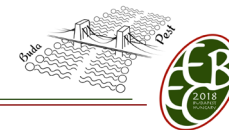
*Max Planck Institute of Biophysics, Department of Structural Biology, Frankfurt am Main, Germany*

13:30 **LUNCH and POSTER VIEWING 1.**

ROOM "A"		ROOM "B"	
15:00	<b>1A. QUINONE REDUCTASES</b> Chair: <b>Alexei A. Stuchebruknov</b>	15:00	<b>1B. OXIDATIVE STRESS</b> Chair: <b>Andrei Vinogradov</b>
15:00	<b>Tweaking the gearbox: the mechanism and regulation of mitochondrial complex I</b> (20+5') <b>Ulrich Brandt</b> <i>Radboud University Medical Center, Nijmegen, Netherlands; University of Cologne, Germany</i>	15:00	<b>Human 2-oxo acid dehydrogenase multienzyme complexes: experimental observation of the thiamin diphosphate-enamine radical species and its contribution to generation of superoxide and hydrogen peroxide <i>in vitro</i></b> (20+5') <b>Frank Jordan</b> <i>Department of Chemistry, Rutgers University, Newark, New Jersey 07102-1811, USA</i>
15:25	<b>Coupling mechanism of complex I</b> (20+5') <b>Leonid Sazanov</b> <i>Institute of Science and Technology Austria, Am Campus 1, Klosterneuburg, 3400 Austria</i>	15:25	<b>Site-specific ROS signalling during ageing</b> (20+5') <b>Alberto Sanz</b> <i>Institute for Cell and Molecular Biosciences, Newcastle University Institute for Ageing, Newcastle University, Newcastle upon Tyne, United Kingdom</i>

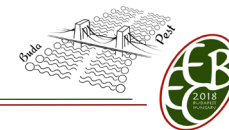


ROOM "A"		ROOM "B"	
15:50	<p><b>Molecular mechanism of long-range proton-electron coupling in respiratory complex I (20+5')</b></p> <p><b>Ville R.I. Kaila</b>            Department of Chemistry, Technical University Munich (TUM), Germany</p>	15:50	<p><b>UCP3 regulation in response to oxidative stress and its role in cardioprotection (20+5')</b></p> <p><b>Susana Cadenas</b>            Centro de Biología Molecular "Severo Ochoa" (CSIC/UAM), Madrid, Spain</p>
16:15	<p><b>Large scale atomistic simulations unveil key role of ubiquinone dynamics in proton pumping by mitochondrial complex I (15+5')</b></p> <p><b>Vivek Sharma</b>            Department of Physics, University of Helsinki, Institute of Biotechnology, University of Helsinki, Finland</p>	16:15	<p><b>E<sub>3</sub>-deficiency by the pathogenic mutations of the human dihydrolipoamide dehydrogenase: elucidation of the molecular pathomechanism by a multifaceted structural approach (15+5')</b></p> <p><b>Attila Ambrus</b>            MTA-SE Laboratory for Neurobiochemistry, Department of Medical Biochemistry, Semmelweis University, Budapest, Hungary</p>
16:35	<p><b>Superoxide: quinone oxidoreductase – a new player in the respiratory chain? (15+5')</b></p> <p><b>Christoph von Ballmoos</b>            Department of Chemistry and Biochemistry, University of Bern, Switzerland</p>	16:35	<p><b>Mitochondrial reactive oxygen species production and pxygen level: linear dependence or not? (15+5')</b></p> <p><b>Alexander Galkin</b>            Department of Pediatrics, Columbia University, Feil Family Brain and Mind Research Institute, Weill Cornell Medicine, New York, NY, USA</p>
17:00	<b>Coffee Break</b>		

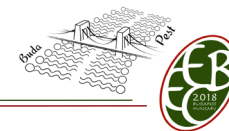


ROOM "A"		ROOM "B"	
17:30	<b>2A. REGULATION OF RESPIRATORY CHAIN, FROM SUBUNITS TO SUPERCOMPLEXES</b> Chair: Gary Cecchini	17:30	<b>2B. MITOCHONDRIAL PHYSIOLOGY, PATHOLOGY</b> Chair:
17:30	<b>The protonmotive force under pressure: an isomorphic analysis (20+5')</b> <b>Erich Gnaiger</b> <i>D. Swarovski Research Laboratory, Department of Visceral, Transplant and Thoracic Surgery, Medical University of Innsbruck, Austria; Oroboros Instruments, Innsbruck, Austria</i>	17:30	<b>Coenzyme Q<sub>10</sub> depletion induces endogenous hypoxia in cultured cells (15+5')</b> <b>Irene Liparulo</b> <i>Department of Pharmacy and Biotechnology - FaBiT, University of Bologna, Italy</i>
17:55	<b>Regulatory interactions within the respiratory chain (20+5')</b> <b>Peter Brzezinski</b> <i>Department of Biochemistry and Biophysics, The Arrhenius Laboratories for Natural Sciences, Stockholm University, Stockholm, Sweden</i>	17:50	<b>Knockout of DAPIT protein disrupts ATP synthase oligomerisation and has a profound role in regulation of glucose homeostasis (15+5')</b> <b>Tomáš Mráček</b> <i>Institute of Physiology, Czech Academy of Sciences, Prague, Czech Republic</i>
18:20	<b>3D super-resolution microscopy reflects mitochondrial cristae alternations and mtDNA nucleoid size and distribution (20+5')</b> <b>Petr Ježek</b> <i>Department of Mitochondrial Physiology, Institute of Physiology of the Czech Academy of Sciences, Prague, Czech Republic</i>	18:10	<b>Mitochondrial uncoupling protein 3 is a biomarker of heart development and fatty acid <math>\beta</math>-oxidation metabolism (15+5')</b> <b>Elena E. Pohl</b> <i>Department of Biomedical Sciences, University of Veterinary Medicine, Vienna, Austria</i>
18:45	<b>Microcompartmentment of mitochondrial OXPHOS, resolved with superresolution microscopy (20+5')</b> <b>Karin B. Busch</b> <i>Mitochondrial Dynamics Group, School of Biology, University of Osnabrück, Germany</i>	18:30	<b>Cyclophilin D isomerase activity controls FoF<sub>1</sub>-ATP synthase oligomerization and mitochondrial ultrastructure (15+5')</b> <b>Rubén Quintana-Cabrera</b> <i>Institute of Functional Biology and Genomics (IBFG), Department of Biochemistry and Molecular Biology, University of Salamanca; Institute of Biomedical Research of Salamanca, University Hospital of Salamanca, CIBERFES. Institute of Health Carlos, Madrid, Spain</i>





ROOM "A"		ROOM "B"	
19:10	<p><b>Subunit composition of the membrane energy-transducing complexes in diverse bacteria and archaea</b> (15+5')</p> <p><b>Michael Y. Galperin</b> National Center for Biotechnology Information, NLM, National Institutes of Health, Bethesda, Maryland, USA</p>	18:50	<p><b>Pore formation by yeast mitochondrial ATP synthase involves subunits e, g and b</b> (15+5')</p> <p><b>Michela Carraro</b> Department of Biomedical Sciences, University of Padova, Consiglio Nazionale delle Ricerche, Institute of Neuroscience, Padova, Italy</p>
19:30	<p><b>The atypical subunit composition of oxidative phosphorylation complexes is associated with original extra structural domains in <i>Euglena gracilis</i></b> (15+5')</p> <p><b>Héctor V. Miranda-Astudillo</b> Laboratoire de Génétique et Physiologie des Microalgues, InBioS/Phytosystems, Institut de Botanique, Université de Liège, Belgium</p>	19:10	<p><b>A role for mitochondrial uncoupling protein 3 in CD4<sup>+</sup> T cell function</b> (15+5')</p> <p><b>Emma B. O'Connor</b> School of Biochemistry and Immunology, Trinity Biomedical Sciences Institute, Trinity College Dublin, Ireland</p>
19:50	<p><b>Control of UCP1 activity in brown-fat mitochondria</b> (15+5')</p> <p><b>Jan Nedergaard</b> The Department of Molecular Biosciences, The Wenner-Gren Institute, Stockholm University, Sweden</p>	19:30	<p><b>Tissue- and substrate-specific patterns in the oxygen kinetics of mitochondrial respiration</b> (15+5')</p> <p><b>András T. Mészáros</b> Oroboros Instruments, Innsbruck, Austria; Institute of Surgical Research, University of Szeged, Hungary</p>



## Monday 27 August, 2018

## 09:00 PLENARY III. MITOCHONDRIAL STRUCTURE, PHYSIOLOGY AND MOTILITY

Chair:

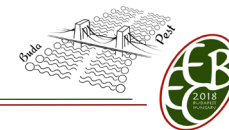
09:00 **The cristae modulator OPA1 requires mitochondrial ATP synthase oligomers to safeguard mitochondrial function** (30+10')**Luca Scorrano***University of Padua, Italy*09:40 **Mitochondrial Calcium Signaling** (30+10')**György Hajnóczky***MitoCare Center, Thomas Jefferson University, USA*10:20 **Dynamics of mitochondrial double membranes, genomes, and functions** (30+10')**Naotada Ishihara***Department of Biological Science, Graduate School of Science, Osaka University and Department of Protein Biochemistry, Institute of Life Science, Kurume University, Japan*11:00 **Coffee Break**

## 11:30 PLENARY IV. MITOCHONDRIA AND CANCER

Chair:

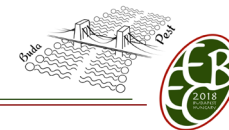
11:30 **Michael P. Lisanti** (30+10')12:10 **Mitochondrial dysfunction and cancer: metabolites and beyond** (30+10')**Christian Frezza***MRC Cancer Unit, University of Cambridge, Hutchison/MRC Research Centre, Cambridge, United Kingdom*12:50 **Targeting mitochondrial Hexokinase 2 to develop a novel anti-neoplastic approach** (30+10')**Andrea Rasola***Department of Biomedical Sciences, University of Padova, Italy*



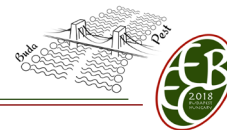


13:30 LUNCH and POSTER VIEWING 2.

ROOM "A"		ROOM "B"	
15:00	<b>3A. QUINOL OXIDASES AND TERMINAL OXIDASES</b> Chair: Francis Millet	15:00	<b>3B. FRONTIERS IN MITOCHONDRIAL RESEARCH</b> Chair: Paolo Bernardi
15:00	<b>Insights into radical intermediates of catalytic Q<sub>o</sub> and Q<sub>i</sub> sites of cytochrome bc<sub>1</sub></b> (20+5') <b>Artur Osyczka</b> <i>Department of Molecular Biophysics, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Kraków, Poland</i>		<b>Selective segregation of mitochondria by stem cells</b> <b>Pekka A. Katajisto</b> <i>University of Helsinki, and Karolinska Institutet, Helsinki, Finland</i>
15:25	<b>The binding mode of the natural compound ilicicolin H to the Q<sub>i</sub> site of the mitochondrial cytochrome bc<sub>1</sub> complex</b> (15+5') <b>Wei-Chun Kao</b> <i>Institute for Biochemistry and Molecular Biology, ZBMZ, Faculty of Medicine, University of Freiburg, Germany</i>		<b>Quan Chen</b>
15:45	<b>Structural basis for energy transduction by respiratory alternative complex III</b> (20+5') <b>Manuela M. Pereira</b> <i>Instituto de Tecnologia Química e Biológica – António Xavier, Universidade Nova de Lisboa; Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Portugal</i>		<b>Stirling Churchman</b>



	ROOM "A"	ROOM "B"
16:10	<b>Cytochrome <i>bd</i> in mycobacteria</b> (15+5') <b>Dirk Bald</b> <i>Department of Molecular Cell Biology, AIMMS, Vrije Universiteit Amsterdam, The Netherlands</i>	<b>Wei Li</b>
16:30	<b>Supercomplexes assembly factor 1 (SCAF1) shapes metabolism</b> (15+5') <b>Sara Cogliati</b> <i>Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC), Melchor Fernandez Almagro, Madrid, Spain</i>	<b>Ye Tian</b>
19:30	<b>ORGAN CONCERT IN THE SZENT ISTVÁN BASILICA</b>	



Tuesday 28 August, 2018

**09:00 PLENARY V. TRANSPORT AND METABOLISM**Chair: **Cesare Indiveri**

09:00 **A chloroplast-localized mitochondrial calcium uniporter homolog mediates stress-specific response in Arabidopsis plants** (30+10')

**Ildiko Szabo***Department of Biology, University of Padova, Italy*

09:40 **Tryptophan rich sensory protein, TSPO: Functional insights from high resolution structures** (30+10')

**Shelagh Ferguson-Miller***Michigan State University, Michigan, USA*

10:20 **Mitochondrial uncoupling proteins: how many of them?** (30+10')

**Yuriy Kirichok***Department of Physiology, University of California San Francisco, CA, USA*

11:00 **Coffee Break**

**11:30 PLENARY VI. MITOCHONDRIAL PHYSIOLOGY AND SIGNALIZATION**

Chair:

11:30 **Control of brain metabolism and behavior by cell-type specific mitochondrial CB<sub>1</sub> receptors** (30+10')

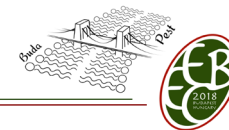
**Etienne Hebert-Chatelain***Université de Moncton, Department of Biology, Canada*

12:10 **The mitochondria reticulum of muscle cells** (30+10')

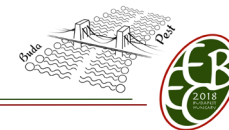
**Robert S. Balaban***Laboratory of Cardiac Energetics, National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD, USA*

12:40 **Roles of endogenous PINK1 and Parkin in vivo – a different type of mitochondrial QC** (30+10')

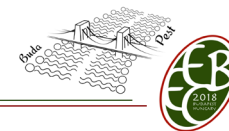
**Richard J. Youle***NIH National Institute for neurological Disorders and Stroke (NINDS)*



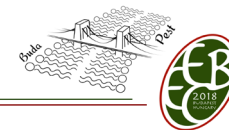
13:30 LUNCH AND POSTER VIEWING 3.		13:30 EBEC SCIENTIFIC COMMITTEE MEETING	
ROOM "A"		ROOM "B"	
15:00	<b>4A. TERMINAL OXIDASES</b> Chair: <b>Ulrike Alexiev</b>	15:00	<b>4B. BIOENERGETICS OF CNS DISEASES</b> Chair:
15:00	<b>Subunit structure and regulation of cytochrome c oxidase (20+5')</b> <b>Susanne Arnold</b> <i>Radboud Institute for Molecular Life Sciences, Radboud University Medical Center, Nijmegen, The Netherlands</i>	15:00	<b>OXPHOS organization in neurons and astrocytes regulates brain metabolism (20+5')</b> <b>Juan P. Bolaños</b> <i>Institute of Functional Biology and Genomics (IBFG), University of Salamanca, CSIC, Salamanca, Spain</i>
15:25	<b>Cytochrome c oxidase subunit 4 isoform switch results in modulation of oxygen affinity (15+5')</b> <b>Petr Pecina</b> <i>IPHYS CAS, Department of Bioenergetics, Prague, Czech Republic</i>	15:25	<b>Thiamine preserves mitochondrial function in a rat model of traumatic brain injury, preventing inactivation of the 2-oxoglutarate dehydrogenase complex (20+5')</b> <b>Andrey V. Kozlov</b> <i>Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna, Austria</i>
15:45	<b>A common core coupling mechanism for mitochondrial and bacterial A-type cytochrome c oxidases? (20+5')</b> <b>Peter R. Rich</b> <i>Institute of Structural and Molecular Biology, University College London, United Kingdom</i>	15:50	<b>Inosine reverses motor neuron toxicity observed in amyotrophic lateral sclerosis patient astrocytes with an adenosine deaminase deficiency (15+5')</b> <b>Scott P. Allen</b> <i>Sheffield Institute for Translational Neuroscience (SITraN), University of Sheffield, Sheffield, United Kingdom</i>
16:10	<b>Heme-copper oxidases – mechanisms for chemistry and energy conservation, including proton pumping (15+5')</b> <b>Margareta R.A. Blomberg</b> <i>Department of Organic Chemistry, Arrhenius Laboratories, Stockholm University, Sweden</i>	16:10	<b>A novel model of Leber's hereditary optic neuropathy: respiratory insights and effects of idebenone (15+5')</b> <b>David A. Brown</b> <i>Virginia Tech, Department of Human Nutrition, Foods, and Exercise and the Virginia Tech Center for Drug Discovery, Blacksburg, VA, USA</i>



ROOM "A"		ROOM "B"	
16:30	<b>Snapshot of an oxygen Intermediate in the catalytic reaction of cytochrome c oxidase (15+5')</b> <b>Denis L. Rousseau</b> <i>Department of Physiology and Biophysics, Albert Einstein College of Medicine, Bronx, NY, USA</i>	16:30	<b>Alterations in the circadian clock-dependent mitochondrial functions in Parkinson patient fibroblasts carrying mutated PARK2 (15+5')</b> <b>Consiglia Pacelli</b> <i>Department of Clinical and Experimental Medicine, University of Foggia, Italy</i>
<b>17:00 Coffee Break</b>			
17:30	<b>5A. ATP SYNTHASES AND ATPases</b> Chair: <b>Salvador Uribe-Carvajal</b>	17:30	<b>5B. TARGETING OF BIOENERGETIC ORGANELLES FOR MITOCHONDRIAL DISEASES</b> Chair: <b>Tony Moore</b>
17:30	<b>Monitoring single F<sub>0</sub>F<sub>1</sub>-ATP synthases at work in the ABELtrap (20+5')</b> <b>Michael Börsch</b> <i>Single-Molecule Microscopy Group, Jena University Hospital, Germany</i>	17:30	<b>Tony Moore (opening) (10')</b>
17:55	<b>The uniqueness of subunit <math>\alpha</math>, <math>\gamma</math> and <math>\epsilon</math> of mycobacterial F-ATP synthases: Evolutionary variants for niche adaptation (15+5')</b> <b>Gerhard Grüber</b> <i>School of Biological Sciences, Nanyang Technological University, Singapore</i>	17:40	<b>Targeting the mitochondrial electron transport chain of Plasmodium falciparum: Opportunities and challenges towards the development of improved antimalarials for the elimination era (20+5')</b> <b>Giancarlo A. Biagini</b> <i>Research centre for Drugs and Diagnostics, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, United Kingdom</i>



ROOM "A"	ROOM "B"
<p>18:15 <b>Unidirectional control of the F<sub>1</sub>F<sub>o</sub>-ATPase/synthase nanomotor by the ζ pawl-ratchet inhibitor protein of <i>Paracoccus denitrificans</i> (20+5')</b>  <b>José J. García-Trejo</b>  <i>Universidad Nacional Autónoma de México (U.N.A.M.), Ciudad de México, Mexico</i></p>	<p>18:05 <b>Targeting the alternative oxidase for antitrypanosomal drug development (20+5')</b>  <b>Daniel Ken Inaoka</b>  <i>School of Tropical Medicine and Global Health, Nagasaki University, 1-12-4, Sakamoto, Nagasaki; Department of Biomedical Chemistry, Graduate School of Medicine, The University of Tokyo; Department of Host-Defense Biochemistry, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan</i></p>
<p>18:40 <b>Zooming in on the F<sub>1</sub>-ATPase substeps using a theory of molecular transfer (15+5')</b>  <b>Sándor Volkán-Kacsó</b>  <i>California Institute of Technology, Noyes Laboratory, Pasadena, CA, USA</i></p>	<p>18:30 <b>Bioenergetic consequences of xenotopic expression of <i>Ciona intestinalis</i> alternative oxidase (AOX) in the mouse (20+5')</b>  <b>Marten Szibor</b>  <i>Faculty of Medicine and Life Sciences, University of Tampere; Institute of Biotechnology, University of Helsinki, Finland</i></p>
<p>19:00 <b>F<sub>1</sub>-ATPase dwell and power stroke relationships (20+5')</b>  <b>Wayne D. Frasch</b>  <i>Arizona State University, Tempe, AZ, USA</i></p>	<p>18:55 <b>Mitochondrial diseases: from mechanisms to therapies (20+5')</b>  <b>Carlo Viscomi</b>  <i>MRC Mitochondrial Biology Unit, University of Cambridge, United Kingdom</i></p>
	<p>19:20 General discussion (10')</p>
<p><b>21:00 GALA DINNER ON THE DANUBE BOAT "EURÓPA"</b></p>	



### Wednesday 29 August, 2018

#### 09:00 PLENARY VII. EVOLUTION AND BIOGENESIS OF BIOENERGETIC SYSTEMS

Chair:

09:00 **Mitochondrial DNA Variation in Human Radiation and Disease** (30+10')

**Douglas C. Wallace**

Center for Mitochondrial and Epigenomic Medicine, The Children's Hospital of Philadelphia and Department of Pathology and Laboratory Medicine, University of Pennsylvania, Philadelphia, USA; Douglas C. Wallace Institute of Mitochondrial and Epigenomic Information Sciences, Xi'an Jiatong University, Xi'an, China

09:40 **Mitochondrial machineries for import and assembly of proteins** (30+10')

**Nikolaus Pfanner**

Institute of Biochemistry and Molecular Biology University of Freiburg, Germany

10:20 **The physiology of microbe number one** (30+10')

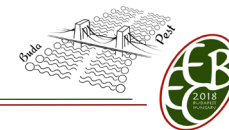
**William Martin**

Institute of Molecular Evolution Heinrich-Heine-Universitaet Duesseldorf, Germany

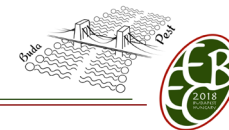
11:00 **Coffee Break**

ROOM "A"		ROOM "B"	
11:30	<b>6A. MICROBIAL RHODOPSINS: PUMPS AND CHANNELS</b> Chair: László Zimányi	11:30	<b>6B. BIOENERGETICS: DISEASE AND HEALTH</b> Chair:
11:30	<b>Interplay of chloride and proton transfers in the novel class of light-driven anion transporters</b> (20+5') <b>Leonid S. Brown</b> Department of Physics and Biophysics Interdepartmental Group, University of Guelph, Ontario, Canada	11:30	<b>The pathomechanism of COX deficiency includes nuclear DNA damage and replicative stress</b> (20+5') <b>Ann Saada (Reisch)</b> Metabolic and Enzyme Laboratory, Department of Genetic and Metabolic Diseases; Hadassah Medical Center and the Hebrew University of Jerusalem, Israel





ROOM "A"	ROOM "B"
<p>11:55 <b>Molecular mechanism of channelrhodopsin</b> (20+5')</p> <p><b>Joachim Heberle</b> Freie Universität Berlin, Department of Physics, Experimental Molecular Biophysics, Berlin, Germany</p>	<p>11:55 <b>Exogenous NAD<sup>+</sup> prevents galactose-induced death of Leigh Syndrome patient fibroblasts with isolated complex I deficiency</b> (20+5')</p> <p><b>Werner J.H. Koopman</b> Department of Biochemistry, Radboud Institute for Molecular Life Sciences, Radboud Center for Mitochondrial Medicine, Radboudumc, Nijmegen, The Netherlands</p>
<p>12:20 <b>Light-driven sodium-pumping rhodopsin: A new concept of active transport</b> (20+5')</p> <p><b>Hideki Kandori</b> Nagoya Institute of Technology, Japan</p>	<p>12:20 <b>Targeting the mitochondrial trifunctional protein in oxidative lung carcinomas</b> (20+5')</p> <p><b>Rodrigue Rossignol</b> INSERM U1211, Bordeaux; Bordeaux University; CELLOMET, Functional Genomics Center (CGFB), Bordeaux, France</p>
<p>12:45 <b>Electrophysiology of the engineered light-driven sodium pump eKR2 and its conversion into a channel</b> (15+5')</p> <p><b>Arend Vogt</b> Experimental Biophysics, Humboldt-Universität zu Berlin, Germany</p>	<p>12:45 <b>Exercise-induced mitochondrial biogenesis: is it a key for diseases prevention?</b> (20+5')</p> <p><b>Zsolt Radák</b> University of Physical Education, Budapest, Hungary</p>
<p>13:05 <b>Time-resolved serial femtosecond crystallography studies at an X-ray free electron laser reveals structural changes in bacteriorhodopsin</b> (20+5')</p> <p><b>Richard Neutze</b> University of Gothenburg, Sweden</p>	<p>13:10 <b>Ákos Gerencsér</b> (15+5')</p>
<p><b>13:30 LUNCH and POSTER VIEWING 4.</b></p>	


**15:00 PTP ROUND TABLE**

 15:00 **John E. Walker**

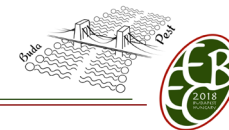
 15:30 **Paolo Bernardi**

 16:00 **ATP synthase in neuronal development, neurodegeneration and plasticity (25+5')**
**Elizabeth Ann Jonas**
*Yale University Dept. Internal Medicine (Endocrinology); New Haven, USA*

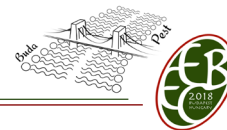
 16:30 **Is F-ATP synthase the mitochondrial permeability transition pore? (25+5')**
**Christoph Gerle**
*Osaka University, Japan*

 17:00 *Coffee Break*

ROOM "A"		ROOM "B"	
17:30	<b>7A. CHANNELS AND TRANSPORTERS</b> Chair:	17:30	<b>7B. BIOENERGETICS OF CANCER</b> Chair:
17:30	<b>Luigi Palmieri</b>	17:30	<b>How do cancer cells harness energy? (20+5')</b> <b>Christos Chinopoulos</b> <i>Department of Medical Biochemistry Semmelweis University, Budapest, Hungary</i>
17:55	<b>The DOs and DON'Ts of secondary-active transporters: lessons from the Na<sup>+</sup>/Ca<sup>2+</sup> exchanger (20+5')</b> <b>José D. Faraldo-Gómez</b> <i>Theoretical Molecular Biophysics Laboratory National Heart, Lung &amp; Blood Institute, National Institutes of Health, Bethesda, MD 20892, USA</i>	17:55	<b>Reversing wrinkled skin and lost hair in mice by restoring mitochondrial function (20+5')</b> <b>Keshav K. Singh</b> <i>Departments of Genetics, University of Alabama at Birmingham, AL, USA</i>

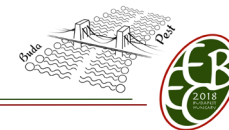


ROOM "A"		ROOM "B"	
18:20	<b>VDAC isoforms in <i>S. cerevisiae</i></b> (20+5') <b>Vito De Pinto</b> Dept. of Biomedicine and Biotechnology, University of Catania, Italy	18:20	<b>David Ferrick</b> (20+5')
18:45	<b>Mitochondrial regulation of mitochondrial potassium channels</b> (20+5') <b>Adam Szewczyk</b> Laboratory of Intracellular Ion Channels, Nencki Institute of Experimental Biology, Warsaw, Poland	18:45	<b>Metabolic vulnerabilities in solid tumors predicted by rapid ex vivo functional analysis</b> (15+5') <b>Andre Koit</b> National Institute of Chemical Physics and Biophysics, Tallinn, Estonia
19:10	<b>The structural mechanism of transport by the mitochondrial ADP/ATP carrier</b> (20+5') <b>Edmund R.S. Kunji</b> MRC Mitochondrial Biology Unit, University of Cambridge, Cambridge Biomedical Campus, United Kingdom	19:05	<b>Zebrafish (<i>Danio rerio</i>) as a model to study the pathophysiological role of the mitochondrial chaperone TRAP1</b> (15+5') <b>Claudio Laquatra</b> Department of Biomedical Sciences and CNR Institute of Neurosciences, University of Padua, Italy
19:35	<b>The human SLC1A5 amino acid transporter: structure/function relationships, regulatory aspects and involvement in energy metabolism</b> (15+5') <b>Mariafrancesca Scalise</b> Department DiBEST (Biologia, Ecologia, Scienze della Terra) Unit of Biochemistry and Molecular Biotechnology, University of Calabria, Arcavacata di Rende, Italy	19:25	<b>The ATP synthase inhibitor protein IF<sub>1</sub> plays a significant role in cancer metabolic flexibility</b> (20+5') <b>Alessandra Baracca</b> Department of Biomedical and Neuromotor Sciences, Lab of Biochemistry and Mitochondrial Pathophysiology, University of Bologna, Italy



### Thursday 30 August, 2018

ROOM "A"		ROOM "B"	
09:00	<b>8A. ANTENNAE AND PHOTOSYSTEMS</b> Chair: Peter Pohl	09:00	<b>8B. VARIABILITY OF MITOCHONDRIAL FUNCTIONS AND PATHOLOGIES</b> Chair:
09:00	<b>Cryo-EM structure of maize PSI-LHCI-LHCII supercomplex</b> (20+5') <b>Mei Li</b> <i>National Laboratory of Biomacromolecules, CAS Center for Excellence in Biomacromolecules, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China</i>	09:00	<b>Sirtuins, NAD+ and Mitochondrial Bioenergetics: a Critique</b> (20+5') <b>David G. Nicholls</b> <i>Buck Institute for Research on Aging, Novato, CA, USA</i>
09:25	<b>Structure and function of photosystem I complexes and potential implications on photosynthetic electron transport regulation in microalgae</b> (15+5') <b>Michael Hippler</b> <i>Institute of Plant Biology and Biotechnology, University of Münster, Germany</i>	09:25	<b>NAD+ homeostasis plays role in mitochondrial biogenesis during beige adipocyte differentiation</b> (20+5') <b>Péter Bai</b> <i>Departments of Medical Chemistry; MTA-DE Lendület Laboratory of Cellular Metabolism, Debrecen, Hungary; Research Center for Molecular Medicine, Faculty of Medicine, University of Debrecen, Hungary</i>
09:45	<b>X-ray and NMR studies of the complex between ferredoxin and photosystem I</b> (20+5') <b>Genji Kurisu</b> <i>Institute for Protein Research, Osaka University, Japan</i>	09:50	<b>Interaction of Alzheimer's disease triggering amyloid beta peptides with membranes and organelles: bioenergetical consequences</b> (20+5') <b>Norbert A. Dencher</b> <i>Moscow Institute of Physics and Technology, MIPT, Dolgoprudniy/Moscow Oblast, Russia; Chemistry/Physical Biochemistry, Technical University Darmstadt, Germany</i>



ROOM "A"		ROOM "B"	
10:10	<b>Energy transfer in LHCII resolved by 2D electronic spectroscopy at ambient and low temperatures (20+5')</b> <b>Petar H. Lambrev</b> <i>Hungarian Academy of Science, Biological Research</i>	10:15	<b>Mitochondrial cAMP augments Ca<sup>2+</sup> uptake into the organelle to support steroidogenesis (15+5')</b> <b>Gergő Szanda</b> <i>Department of Physiology, Semmelweis University, MTA-SE Laboratory of Molecular Physiology, Semmelweis University and Hungarian Academy of Sciences, Budapest, Hungary</i>
10:35	<b>Global spectroscopic analysis to study the regulation of the proton motive force in photosynthetic organisms (20+5')</b> <b>Giovanni Finazzi</b> <i>Cell and Plant Physiology laboratory, CEA Grenoble, France</i>	10:35	<b>Molecular identity and regulatory mechanisms of the mitochondrial uncoupling protein of regular somatic tissues (15+5')</b> <b>Ambre M. Bertholet</b> <i>Department of Physiology, University of California, San Francisco, USA</i>
<b>11:00 Coffee Break</b>			
<b>11:30 PLENARY VIII. PHOTOSYNTHETIC SYSTEMS</b> Chair: <b>Győző Garab</b>			
11:30	<b>The quantum design of photosynthesis (30+10')</b> <b>Rienk van Grondelle</b> <i>Department of Biophysics, Faculty of Sciences, VU University Amsterdam, De Boelelaan Amsterdam, The Netherlands</i>		
12:10	<b>Photosynthetic reaction centers – Robustness with increased complexity (30+10')</b> <b>Nathan Nelson</b> <i>Department of Biochemistry and Molecular Biology, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Israel</i>		
12:50	<b>Mechanism of photosynthetic water-splitting catalyzed by the Mn<sub>4</sub>CaO<sub>5</sub> metal cluster in photosystem II (30+10')</b> <b>Jian-Ren Shen</b> <i>Research Institute for Interdisciplinary Science, Okayama University, Japan</i>		
<b>13:30 CLOSING CEREMONY</b>			